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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/792,122	03/03/2004	Steven T. Antoch	003797.00767	3925

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EXAMINER

GOFMAN, ALEX N

ART UNIT	PAPER NUMBER
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2162

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/19/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/792,122	ANTOCH, STEVEN T.	
	Examiner	Art Unit	
	Alex Gofman	2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Remarks

Amendment submitted February 2, 2007 has been considered by examiner. Claims 1-19 are pending.

Response to Arguments

1. Applicant's arguments filed February 2, 2007 have been fully considered but they are not persuasive. Applicant argues that the new limitation added to Claims 1, 9, 16 and 18 would traverse the original rejection. See prior art rejection below where the prior art of record recites the added limitations.

Claim Objections

Claim objection to Claims 5-7 and 13-15 are withdrawn in light of the amendment dated February 2, 2007.

Claim objection to Claim 10 is withdrawn in light of the amendment dated February 2, 2007.

Claim objection to Claims 14 and 15 is withdrawn in light of the amendment dated February 2, 2007.

Claim Rejections - 35 USC § 101

Claims 1 and 9 were rejected under 35 U.S.C. 101 in the Office Action dated October 3, 2006 because the claimed invention is directed to non-statutory subject matter.

The rejection is maintained. Even though the applicant changed the preamble of the Claims, the change does not remedy the problem. Claims 1 and 9 recite various components (objects) of the invention. However, storing components on a computer readable medium is considered an arrangement of data, which is non-statutory subject matter. When nonfunctional descriptive material is recorded on some computer-readable medium, in a computer or on an electromagnetic carrier signal, it is not statutory since no requisite functionality is present to satisfy the practical application requirement. Merely claiming nonfunctional descriptive material, i.e., abstract ideas, stored in a computer-readable medium, in a computer, on an electromagnetic carrier signal does not make it statutory.

Claim 16 was rejected under 35 U.S.C. 101 in the Office Action dated October 3, 2006 because the claimed invention is directed to non-statutory subject matter. The rejection is withdrawn.

Claim Rejections - 35 USC § 112

Claims 9 and 10 were rejected under 35 U.S.C. 112 Second Paragraph in the Office Action dated October 3, 2006. The rejection is withdrawn.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 4, 8-10, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Brumme et al (US Patent 6,134, 559), hereinafter, Brumme.

Claim 1: Brumme discloses a computer-readable medium having a tangible component, the computer-readable medium having stored thereon a data structure, the data structure separating storage of an attribute value from handling of the attribute value, the data structure comprising:

- a. A model element class for implementing the constructs described by meta-data; the model element class storing an attribute value (Col 3 In 17-30, Col 22 In 32-63).
- b. A meta-attribute information object for describing attributes of the model element class (Col 32 In 49-67, Col 33 In 1-13). [Meta data about attributes describes meta-attribute information.]
- c. A model element field handler object for accessing the attribute value stored in the model element class (Col 14 In 51-65). [The handler is able to set properties in a class and therefore it accesses the class.]
- d. wherein the storage of the attribute value is separate from handling of the attribute value (Col 3 In 17-30, Col 22 In 32-63, Col 14 In 51-65). [The attributes are stored separately from where attributes are handled. The attributes are handled by handlers.]

Claim 4: Brumme discloses the computer-readable medium of Claim 1 above and further discloses wherein the model element field handler object sets the attribute value sorted in the model element class (Col 14 ln 51-65).

Claim 8: Brumme discloses the computer-readable medium of Claim 1 above and further discloses wherein the data structure further comprises a meta-class information object for storing data associated with the model element (Col 3 ln 54-67).

Claim 9: Brumme discloses a computer-readable medium having a tangible component, the computer-readable medium having stored thereon a data structure, the data structure separating storage of an attribute value from handling of the attribute value, the data structure comprising:

a. A container for storing meta-data in a tree structure (Col 12 ln 54-61, Col 13 ln 41-64). [Brumme describes a relationship and association between objects. An association between objects, according to Brumme, may be considered as one object describing another object and thus form a metadata relationship.]

b. A model element class for implementing the constructs described by meta-data; the model element class storing an attribute value (Col 3 ln 17-30, Col 22 ln 32-63).

c. A meta-class information object for storing data associated with the model element (Col 3 ln 54-67).

d. A meta-attribute information object for describing attributes of the model element class (Col 32 ln 49-67, Col 33 ln 1-13). [Meta data about attributes describes meta-attribute information.]

e. A model element field handler object for accessing the attribute value stored in the model element class (Col 14 ln 51-65). [The handler is able to set properties in a class and therefore it accesses the class.]

f. wherein the storage of the attribute value is separate from handling of the attribute value (Col 3 ln 17-30, Col 22 ln 32-63, Col 14 ln 51-65). [The attributes are stored separately from where attributes are handled. The attributes are handled by handlers.]

Claim 10: Brumme discloses the computer-readable medium of Claim 9 above and further discloses wherein the container comprises a store acting as the root of the tree structure (Col 12 ln 54-61, Col 13 ln 41-64, Col 7 ln 54-60).

Claim 12: Brumme discloses the computer-readable medium of Claim 1 above and further discloses wherein the model element field handler object sets the attribute value stored in the model element class (Col 14 ln 51-65).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brumme et al (6,134,559) in view of Mathews et al (2003/0163479).

Claim 2: Brumme discloses the computer-readable medium of Claim 1 above, but does not explicitly disclose wherein the attribute value is stored in a private member field of the model element class. However, Mathews discloses using a private method (Figure 5, paragraph 0067). It would have been obvious for one of ordinary skill in the art at the time the invention was made to use a private member field in Brumme. One would have been motivated to do so to give only certain methods or users the right to access that particular method, function or attribute.

6. Claims 3, 5, 6, 7, 11, 13, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brumme et al (6,134,559) in view of Coad et al (6,851,105).

Claim 3: Brumme discloses the computer-readable medium of Claim 1 above, but does not explicitly disclose wherein the model element field handler object comprises a singleton pattern. However, Coad discloses using a singleton pattern (Col 8 ln 29-47). A singleton pattern, according to Coad, is a class with only one instance and contains only provides a global point of access to it. It would have been obvious for one of ordinary skill in the art at the time the invention was made to use a singleton pattern in Brumme. One would have been motivated to do so in order to have only one instance of a class, and thereby using only the single object to coordinate actions across a system.

Claim 5: Brumme discloses the computer-readable medium of Claim 1 above, but does not explicitly disclose wherein the model element field handler comprises a

typed model element field handler subclass. A typed model element field handler subclass is defined by the applicant as an abstract class that implements methods defined in the abstract class. (Please see the Claim Objection related to this claim above.) Coad discloses using an abstract class, in the form of an interface class, which defines methods within its class (Col 1 Ln 44-67). It would have been obvious for one of ordinary skill in the art at the time the invention was made to have the model element field handler comprise a subclass that is an abstract class to implement methods declared in the parent class in Brumme. One would have been motivated to do so in order for unrelated classes to be able to interact with one another.

Claims 6 and 7: Brumme and Coad disclose the computer-readable medium of Claim 5 above, and Brumme further discloses wherein the typed model element field handler subclass defines a get value function for accessing the attribute value and a set value function for setting the attribute value (Col 13 Ln 41-64, Col 25 Ln 54-67, Col 26 Ln 1-10). [Get and set functions are common generic functions are used to get or set values for attributes in classes, subclasses, or just with regular functions.]

Claim 11: Brumme discloses the computer-readable medium of Claim 9 above, but does not explicitly disclose wherein the model element field handler object comprises a singleton pattern. However, Coad discloses using a singleton pattern (Col 8 Ln 29-47). A singleton pattern, according to Coad, is a class with only one instance and contains only provides a global point of access to it. It would have been obvious for one of ordinary skill in the art at the time the invention was made to use a singleton pattern in Brumme. One would have been motivated to do so in order to have only one

instance of a class, and thereby using only the single object to coordinate actions across a system.

Claim 13: Brumme discloses the computer-readable medium of Claim 1 above, but does not explicitly disclose Brumme discloses the computer-readable medium of Claim 9 above, but does not explicitly disclose wherein the model element field handler comprises a typed model element field handler subclass. A typed model element field handler subclass is defined by the applicant as an abstract class that implements methods defined in the abstract class. (Please see the Claim Objection related to this claim above.) Coad discloses using an abstract class, in the form of an interface class, which defines methods within its class (Col 1 ln 44-67). It would have been obvious for one of ordinary skill in the art at the time the invention was made to have the model element field handler comprise a subclass that is an abstract class to implement methods declared in the parent class in Brumme. One would have been motivated to do so in order for unrelated classes to be able to interact with one another.

Claims 14 and 15: Brumme and Coad disclose the computer-readable medium of Claim 13 above, and Brumme further discloses wherein the typed model element field handler subclass defines a get value function for accessing the attribute value and a set value function for setting the attribute value (Col 13 ln 41-64, Col 25 ln 54-67, Col 26 ln 1-10). [Get and set functions are common generic functions are used to get or set values for attributes in classes, subclasses, or just with regular functions.]

7. Claims 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brumme et al (6,134,559) in view of Brogden et al (Java 2 Programmer Exam Cram 2), hereinafter, Brogden.

Claim 16: Brumme and Brogden disclose a method implemented at least in part by a computing device, the computing device accessing an attribute value within a data structure, the data structure separating storage of the attribute value from handling of the attribute value, the method comprising:

a. Storing the attribute value in a private member field of a model element class. Brumme does not explicitly disclose using a private member field, however, Brogden does (Chapter 5 Sec 2). It would have been obvious for one of ordinary skill in the art at the time the invention was made to store the attribute value in a private member field of a model element class in Brumme. One would have been motivated to do so in order to limit access to a specified attribute.

b. Brumme discloses using a handler class, but does not explicitly disclose declaring a nested handler class, the nested handler class being a subclass of a generic handler class. However, Brogden discloses the reasoning to use nested classes (Chapter 5 Sec 2). It would have been obvious for one of ordinary skill in the art at the time the invention was made to declare a nested handler class, the nested handler class being a subclass of a generic handler class in Brumme. One would have been motivated to do so in order to be able to use a certain functionality of a class from within another class without complicating the inheritance hierarchy of either class.

c. Brumme discloses issuing a get value function to obtain the attribute value from the model element class (Col 13 In 41-64, Col 25 In 54-67, Col 26 In 1-10).

d. Brumme discloses receiving the attribute value from the model element class (Col 13 In 41-64, Col 25 In 54-67, Col 26 In 1-10). [A get function is what retrieves the attribute function.]

e. Brumme discloses wherein the storage of the attribute value is separate from handling of the attribute value (Col 3 In 17-30, Col 22 In 32-63, Col 14 In 51-65). [The attributes are stored separately from where attributes are handled. The attributes are handled by handlers.]

Claim 17: Brumme and Brogden disclose the method of Claim 16 above, but Brumme does not explicitly disclose wherein the nested handler class inherits base functionality from the generic handler class. However, Brogden discloses the explanation of using nested classes (Chapter 5 Sec 2). When nested classes are used, they inherit information from it's parent class or class it was nested from. It would have been obvious for one of ordinary skill in the art at the time the invention was made to have the nested handler class inherits base functionality from the generic handler class in Brumme. One would have been motivated to do so because nested classes always inherit information from the class it is nested from.

Claim 18: Brumme and Brogden disclose a method implemented at least in part by a computing device, the computing device setting an attribute value within a data structure, the data structure separating storage of the attribute value from handling of the attribute value, the method comprising:

a. Brumme discloses using a handler class, but does not explicitly disclose declaring a nested handler class, the nested handler class being a subclass of a generic handler class. However, Brogden discloses the reasoning to use nested classes (Chapter 5 Sec 2). It would have been obvious for one of ordinary skill in the art at the time the invention was made to declare a nested handler class, the nested handler class being a subclass of a generic handler class in Brumme. One would have been motivated to do so in order to be able to use a certain functionality of a class from within another class without complicating the inheritance hierarchy of either class

b. Brumme discloses issuing a set value function to set the attribute value for the model element class (Col 13 In 41-64, Col 25 In 54-67, Col 26 In 1-10).

c. Brumme discloses setting the attribute value (Col 14 In 51-64). [A set function sets the attribute value.]

d. Brumme discloses storing the attribute value in the model element class (Col 3 In 17-30, Col 14 In 51-64). [Once an attribute value is set, it is stored in a specified object or class.]

e. Brumme discloses wherein the storage of the attribute value is separate from handling of the attribute value (Col 3 In 17-30, Col 22 In 32-63, Col 14 In 51-65). [The attributes are stored separately from where attributes are handled. The attributes are handled by handlers.]

Claim 19: Brumme and Brogden disclose a method as in Claim 18 above, but Brumme does not explicitly disclose wherein the nested handler class inherits base functionality from the generic handler class. However, Brogden discloses the

explanation of using nested classes (Chapter 5 Sec 2). When nested classes are used, they inherit information from it's parent class or class it was nested from. It would have been obvious for one of ordinary skill in the art at the time the invention was made to have the nested handler class inherits base functionality from the generic handler class in Brumme. One would have been motivated to do so because nested classes always inherit information from the class it is nested from.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alex Gofman whose telephone number is (571)270-1072. The examiner can normally be reached on Mon-Fri 9am-3pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571)272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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